

California Education and the Environment Initiative

Increasing Environmental Literacy for K–12 Students...

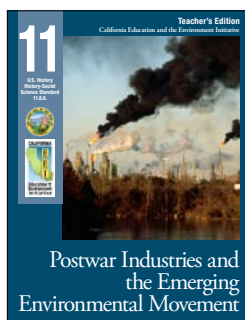
Because the Future is in Their Hands



TEACH COMMON CORE STANDARDS WITH THE EEI CURRICULUM

Created with your needs in mind, this document shows the correlation between the EEI Curriculum and the California Common Core State Standards. By teaching the EEI unit lessons in your classroom, you will be simultaneously addressing the Common Core standards depicted in this guide.

11.8.6.—Postwar Industries and the Emerging Environmental Movement



This unit gives a comprehensive historical background about the creation of and reasoning behind postwar industry. Students are asked to think and write about the effects on the environment and human health as a result of this historical event. The lessons focus on discussion as well as synthesizing multiple sources in order for students to come to their own understanding about postwar industry's lasting effects on California's people and industries.

		RH.11–12.1	RH.11–12.2	RH.11–12.3	RH.11–12.4	RH.11–12.5	RH.11–12.7	RH.11–12.8	RH.11–12.9	RH.11–12.10	WHST.11–12.1	WHST.11–12.2	WHST.11–12.4	WHST.11–12.5	WHST.11–12.9	WHST.11–12.10	SL.11–12.1	SL.11–12.2
LESSONS	California Connections				✓	✓	✓			✓		✓						
	1	✓	✓		✓		✓				✓	✓	✓				✓	
	2				✓		✓		✓	✓			✓		✓	✓	✓	
	3				✓		✓			✓		✓	✓			✓	✓	✓
	4	✓		✓	✓								✓				✓	
	5		✓		✓			✓	✓			✓	✓		✓		✓	
	Traditional Assessment										✓		✓	✓				
	Alternative Assessment											✓	✓					
		COMMON CORE STANDARDS																

Note: For your reference, the list of California Common Core State Standards abbreviations is on the following page.

Using the EEI-Common Core Correlation Matrix

The matrix on the front page identifies a number of Common Core standards that are supported by this EEI unit. However, the check marks in the matrix do not necessarily signify that the Common Core standards checked will be taught to mastery by using this EEI unit alone. Teachers are encouraged to select which Common Core standards they wish to emphasize, rather than teaching to every indicated standard. By spending more time on selected standards, students will move toward greater Common Core proficiency in comprehension, critical thinking and making reasoned arguments from evidence. Teaching this EEI unit will provide opportunities for teachers to implement the shift in instructional practice necessary for full Common Core implementation.

California Common Core State Standards Abbreviations

- **CCCSS:** California Common Core State Standards
- **RH:** Reading Standards for Literacy in History/Social Studies
- **SL:** Speaking and Listening Standards
- **WHST:** Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects

Note: Since each Common Core standard includes a breadth of skills, in this correlation, the portion of the standard description that is featured in the Common Core Standards and Applications is cited, using “...” to indicate omitted phrases. For a list of the complete standard descriptions, please see the Common Core Reference Pages located on pages 18–19 of this document.

A Note about Common Core Speaking and Listening Standards

Throughout this unit, students participate in various learning structures and groups to analyze, discuss, and synthesize data, which supports the skill in Speaking and Listening Standard 1 “Participate effectively in a range of collaborative discussions (one-on-one, groups...) with diverse partners.” With prior instruction on collaborative discussions, these various groupings and the materials students examine lend themselves to prime discussion material for collaborative discussions. Learning structures with tasks for pairs and groups are in the following lessons:

- **Lesson 1:** Whole class
- **Lesson 2:** Whole class, 15 groups
- **Lesson 3:** Whole class, 6 groups
- **Lesson 4:** Whole class, groups of 5
- **Lesson 5:** Whole class

National Geographic Resources

- **Human Imprint** wall map (Lesson 1)
- **View from Space** wall map (Lesson 1)

Unit Assessment Options

Assessments	Common Core Standards Applications
Traditional Assessment	
Students identify environmental regions, respond with short answers to open-ended questions, and write an essay based on a provided prompt.	<p>WHST.11–12.1: Write arguments focused on <i>discipline-specific content</i>.</p> <ul style="list-style-type: none"> a) Introduce precise, knowledgeable claim(s)...and create an organization that logically sequences the claim(s)... b) Develop claim(s) and counterclaims fairly and thoroughly... c) Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify... d) Establish and maintain a formal style and objective tone... e) Provide a concluding statement... <p>WHST.11–12.4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p>WHST.11–12.5: Develop and strengthen writing as needed...</p>
Alternative Assessment	
<p>Students write an editorial on a researched environmental issue in the Great Central Valley.</p> <p>Tip: Provide students with access to the rubric prior to writing. Discuss the elements that will be assessed.</p>	<p>WHST.11–12.2: Write informative/explanatory texts...</p> <ul style="list-style-type: none"> a) Introduce a topic and organize complex ideas, concepts, and information... b) Develop the topic thoroughly... c) Use varied transitions and sentence structures... d) Use precise language, domain-specific vocabulary, and techniques such as metaphor... e) Provide a concluding statement... <p>WHST.11–12.4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>

Lesson 1: Postwar Changes in the Great Central Valley

Students explore various features of the Great Central Valley using a variety of maps. They then examine the changes that have occurred in this region due to postwar industrial activities.



National Geographic Resources

- **Human Imprint** wall map
- **View from Space** wall map

Use this correlation in conjunction with the **Procedures** located on pages 38–39 of the Teacher’s Edition. Only procedure steps with a Common Core correlation are included in the table below.

Student Tasks	Common Core Standards Applications
<p>Vocabulary Development: For depth of understanding, vocabulary may be featured within the context of the unit instead of or in addition to the beginning of the lesson.</p> <p>Tip: If <i>Dictionary Workbooks</i> need to be reused from year to year, students should not write in them.</p>	<p>RH.11–12.4: Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of the text...</p>
<p>Steps 1 and 2: Present two wall maps, first View From Space, and then Human Imprint. Question students about the features of each map using the provided prompts.</p>	<p>RH.11–12.7: Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.</p> <p>SL.11–12.1: Initiate and participate effectively in a range of collaborative discussions (...teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i>, building on others’ ideas and expressing their own clearly and persuasively.</p>
<p>Step 3: Read <i>California Connections: A Postwar Boom in the Central Valley</i>, and then project Environmental Consequences of Postwar Industry 1. Ask students to list the environmental problems and their probable causes as presented in the reading.</p> <p>Suggestion: Refer to the <i>Reading California Connections Using a Common Core Reading and Writing Focus</i> on pages 13–17 to view specific suggestions for integrating Common Core standards while reading the selection not only for content, but for text structure as well.</p>	<p>RH.11–12.2: Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.</p> <p>RH.11–12.7: Integrate and evaluate multiple sources of information presented in diverse formats and media...to address a question or solve a problem.</p> <p>SL.11–12.1: Initiate and participate effectively in a range of collaborative discussions...</p>

Student Tasks	Common Core Standards Applications
<p>Step 4: Lead a discussion using the provided questions.</p>	<p>SL.11–12.1: Initiate and participate effectively in a range of collaborative discussions..., building on others’ ideas and expressing their own clearly and persuasively.</p> <p>a) Come to discussions prepared...; explicitly draw on that preparation by referring to evidence from texts and other research...</p>
<p>Step 5: Tell students to turn to Changes in the Great Central Valley (Student Workbook, pages 3–5). Instruct them to answer the questions using California Connections: A Postwar Boom in the Central Valley.</p> <p>Suggestion: Have students embed quotes from California Connections into their responses.</p> <p>Suggestion: After responding, have students choose one of their responses, and turn their answer into a defensible thesis statement. Then, guide them to find more sources online to support their claim, and conduct a research project ranging from an annotated works-cited page to a full process essay.</p> <p>Tip: If Student Workbooks need to be reused from year to year, students should not write in them. Some strategies teachers use to preserve the workbooks are:</p> <ul style="list-style-type: none"> ■ Have students use binder paper or other lined or unlined paper. ■ Have students use a sheet protector over the page and write with a whiteboard marker. ■ Do together as a class on a projector or chart paper. ■ Project the digital fill-in version and do together as a class. ■ Students use digital devices to fill in the digital version found on the website. ■ Make student copies when necessary. 	<p>RH.11–12.1: Cite specific textual evidence to support analysis of...secondary sources, connecting insights gained...</p> <p>WHST.11–12.1: Write arguments focused on discipline-specific content.</p> <p>a) Introduce precise, knowledgeable claim(s)...and create an organization that logically sequences the claim(s)...</p> <p>b) Develop claim(s) and counterclaims fairly and thoroughly...</p> <p>c) Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify...</p> <p>d) Establish and maintain a formal style and objective tone...</p> <p>e) Provide a concluding statement...</p> <p>WHST.11–12.2: Write informative/explanatory texts...</p> <p>WHST.11–12.4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>

Lesson 2: Environmental Regions and Resources of North America

Students examine a map of North America's environmental regions, determine the ecosystem goods and ecosystem services available in the various environmental regions on the continent, and identify their use in the agriculture and energy industries after World War II.



Use this correlation in conjunction with the **Procedures** located on pages 52–53 of the Teacher's Edition. Only procedure steps with a Common Core correlation are included in the table below.

Student Tasks	Common Core Standards Applications
<p>Vocabulary Development: For depth of understanding, vocabulary may be featured within the context of the unit instead of or in addition to the beginning of the lesson.</p>	<p>RH.11–12.4: Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of the text...</p>
<p>Steps 1 and 2: Brainstorm with students using the prompts provided to access their prior knowledge in preparation for the next steps in the lesson. Project Environmental Regions in North America (Visual Aid #2) to allow students to share what they already know about the regions.</p> <p>Suggestion: Discuss the features of this map and the features of another type of map (political, relief, etc.). Help students realize that different types of maps relate different kinds of information, based upon the purpose/task.</p>	<p>RH.11–12.7: Integrate and evaluate multiple sources of information presented in diverse formats... (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.</p> <p>RH.11–12.9: Integrate information from diverse sources... into a coherent understanding of an idea or event, noting discrepancies among sources.</p> <p>SL.11–12.1: Initiate and participate effectively in a range of collaborative discussions... on <i>grades 11–12 topics, texts, and issues</i>...</p>
<p>Step 3: Divide the class into 15 groups and distribute 15 Ecological Regions of North America fact sheets and Student Editions to each group. Have students correlate the information with the map to make a determination as to whether there are enough resources available in their assigned area.</p>	<p>RH.11–12.7: Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.</p> <p>RH.11–12.10: By the end of grade 12, read and comprehend history/social studies texts... independently and proficiently.</p>
<p>Step 4: The teacher guides students as they answer the questions on Why Locate There? (Student Workbook, pages 6–7).</p>	<p>WHST.11–12.4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p>WHST.11–12.9: Draw evidence from informational texts to support analysis, reflection, and research.</p>

Student Tasks	Common Core Standards Applications
<p>Step 4 (Continued):</p> <p>The teacher guides students as they answer the questions on Why Locate There? (Student Workbook, pages 6–7).</p>	<p>WHST.11–12.10: Write routinely over... shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p>

Lesson 3: Tracking the Postwar Industrial Boom

Students visit learning stations to gather information about particular extraction, harvesting, processing, and transportation methods used by the agricultural and energy industries during the postwar period. They discuss the potential effects of those practices on natural systems.



Use this correlation in conjunction with the **Procedures** located on pages 64–65 of the Teacher’s Edition. Only procedure steps with a Common Core correlation are included in the table below.

Student Tasks	Common Core Standards Applications
<p>Vocabulary Development: For depth of understanding, vocabulary may be featured within the context of the unit instead of or in addition to the beginning of the lesson.</p>	<p>RH.11–12.4: Determine the meaning of words and phrases as they are used in a text...</p>
<p>Step 1: Brainstorm with students about the six pre-set industry stations in the room to access their prior knowledge. Write their ideas on the board using the directions in the Procedures.</p>	<p>SL.11–12.1: Initiate and participate effectively in a range of collaborative discussions (...teacher-led) with diverse partners on <i>grades 11–12 topics, texts, and issues</i>...</p>
<p>Step 2: Divide the class into six groups, and assign each to an industry station. Direct students to use Student Editions to collaboratively take notes on each station in the Postwar Industries at Work section of their workbooks.</p>	<p>RH.11–12.10: By the end of grade 12, read and comprehend history/social studies texts...independently and proficiently.</p> <p>SL.11–12.1: Initiate and participate effectively in a range of collaborative discussions (...in groups,...) with diverse partners...</p> <p>WHST.11–12.4: Produce clear and coherent writing...</p> <p>WHST.11–12.10: Write routinely over... shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p>
<p>Step 3: Lead a whole-class discussion synthesizing the findings of the industry station activity in Step 2.</p>	<p>SL.11–12.1: Initiate and participate effectively in a range of collaborative discussions...</p>

Student Tasks	Common Core Standards Applications
<p>Step 4: Students complete Part 2 of Postwar Industries at Work.</p> <p>Suggestion: Have the student groups research agriculture and energy industries in their local counties to see if any are thriving there today. Have students present to the class what local industries are there and lead class discussion on their impact.</p>	<p>RH.11–12.7: Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.</p> <p>SL.11–12.2: Integrate multiple sources of information presented in diverse formats and media...</p> <p>WHST.11–12.2: Write informative/explanatory texts...</p> <p>WHST.11–12.4: Produce clear and coherent writing...appropriate to task, purpose, and audience.</p>

Lesson 4: Effects of the Postwar Boom

Students read one of five case studies and then teach their peers about the case they read. The class categorizes, on a chart, environmental problems and their causes in each case and discusses their similarities and differences.



Use this correlation in conjunction with the **Procedures** located on pages 86–87 of the Teacher’s Edition. Only procedure steps with a Common Core correlation are included in the table below.

Student Tasks	Common Core Standards Applications
<p>Vocabulary Development: For depth of understanding, vocabulary may be featured within the context of the unit instead of or in addition to the beginning of the lesson.</p>	<p>RH.11–12.4: Determine the meaning of words and phrases as they are used in a text...</p>
<p>Step 1: As a class, fill out the Natural Systems and Human Social Systems Venn diagram.</p> <p>Suggestion: Project the Venn Diagram and have students add the key vocabulary after they provide a justification for the placement. Encourage students to cite text to support their reasoning.</p>	<p>RH.11–12.3: Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.</p> <p>SL.11–12.1: Initiate and participate effectively in a range of collaborative discussions (...teacher-led)..., building on others’ ideas and expressing their own clearly and persuasively.</p> <p>a) Come to discussions prepared...</p>
<p>Step 3: Assign each student a section in Community Case Studies. Give students time to take notes on their section independently. Then form groups of five with one “expert” per section so that students may share information and notes to be written in Truth and Consequences.</p> <p>Suggestion: Encourage students to cite text in their answers and to explain why the text they have cited supports their analysis.</p>	<p>RH.11–12.1: Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.</p> <p>SL.11–12.1: Initiate and participate effectively in a range of collaborative discussions...</p> <p>a) Come to discussions prepared...</p> <p>WHST.11–12.4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>

Lesson 5: Developing Environmental Concerns

Students gather information about DDT and Rachel Carson. They read an excerpt from *Silent Spring*, discuss its message, and analyze responses from world leaders to Carson's work. Then, they discuss the assessment process of resource use in the United States today.



Use this correlation in conjunction with the **Procedures** located on pages 102–103 of the Teacher's Edition. Only procedure steps with a Common Core correlation are included in the table below.

Student Tasks	Common Core Standards Applications
<p>Vocabulary Development: For depth of understanding, vocabulary may be featured within the context of the unit instead of or in addition to the beginning of the lesson.</p>	<p>RH.11–12.4: Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of the text...</p>
<p>Step 1: Project DDT Talking Points 1 and DDT Talking Points 2 (Visual Aids #5–6) and read aloud the information about DDT. Ask the class what DDT has in common with some of the technological advancements they have been studying recently.</p>	<p>SL.11–12.1: Initiate and participate effectively in a range of collaborative discussions..., building on others' ideas and expressing their own clearly and persuasively.</p>
<p>Step 2: After reading Chapter 1 of <i>Silent Spring</i>, ask students to analyze the author's intent.</p> <p>Suggestion: This selection can be used for a 'close reading' exercise. In the first reading, have students read independently and silently. In the second reading, have students read to identify Rachel Carson's intent and the tone she sets with the description of the town. In the third read through, have students read together, pausing after each section to discuss potential cause and effects.</p>	<p>RH.11–12.2: Determine the central ideas or information of a primary...source; provide an accurate summary that makes clear the relationships among the key details and ideas.</p> <p>RH.11–12.8: Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other information.</p>
<p>Steps 3–5: Instruct students to turn to In Their Own Words (Student Workbook, pages 14–16). Have them work with a partner for 15 minutes to complete the questions under each quotation in Part 1. Have volunteers share their answers with the class.</p> <p>Discuss the debate that arose due to the publication of <i>Silent Spring</i> and the resulting changes in governmental policies related to "human imprints" on the environment.</p>	<p>RH.11–12.8: Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other information.</p> <p>RH.11–12.9: Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.</p>

Student Tasks	Common Core Standards Applications
<p>Steps 3–5 (Continued):</p>	<p>WHST.11–12.2: Write informative/explanatory texts...</p> <ul style="list-style-type: none"> a) Introduce a topic and organize complex ideas, concepts, and information... b) Develop the topic thoroughly... c) Use varied transitions and sentence structures... d) Use precise language, domain-specific vocabulary, and techniques such as metaphor... e) Provide a concluding statement... <p>WHST.11–12.4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p>WHST.11–12.9: Draw evidence from informational texts to support analysis, reflection, and research.</p>

Unit Assessment

Refer to the introduction pages at the front of this document for information regarding the Traditional and Alternative Assessments for this unit and their Common Core correlations.

Reading *California Connections* using a Common Core Reading and Writing Focus

Reading

History teachers can further enhance the teaching of Common Core Reading Literacy Standards by noting the suggestions below and in the following pages while reading the **California Connections** selection for content. Explicitly teach students to pay attention to the structure of the text by noting the following:

- Note how the author cites evidence to support main points and analysis; note any gaps or inconsistencies; note the date and origin of the source and whether it is primary or secondary. **(RH.11–12.1)**
- Note how the author sets up the central ideas or information; trace the relationship among key details and ideas; summarize how key events or ideas develop over the course of the text. **(RH.11–12.2)**
- Analyze a series of events described in the text; evaluate various explanations for actions or events; determine which explanation best accords with textual evidence; determine whether earlier events caused later ones or simply preceded them; acknowledge where matters are left uncertain. **(RH.11–12.3)**
- Note how the author explains and refines the meaning of key terms, symbols, domain-specific words, and phrases. **(RH.11–12.4)**
- Analyze how the structure is used to emphasize key points or advance an explanation or analysis and how key sentences, paragraphs, and larger portions of the text contribute to the whole. **(RH.11–12.5)**
- Compare and evaluate the point of view of the author(s); note which details are included and emphasized; assess the author's claims, reasoning, and evidence; compare the text with other authors on the same topic. **(RH.11–12.6)**
- Note how the information in the **California Connections** text integrates with information provided throughout the unit in diverse visual, quantitative, and qualitative formats, including tables, charts, research data, and maps, in print or digital texts. **(RH.11–12.7)**
- Assess whether the author's extent of reasoning and evidence in a text support the author's claim; evaluate the author's premises, claims, and evidence. **(RH.11–12.8)**
- When other documents are included, compare and contrast findings presented in this text to those in other sources, noting when the findings support or contradict previous explanations, and identify any discrepancies. **(RH.11–12.9)**
- Note comprehension strategies for understanding text. **(RH.11–12.10)**

Note: Standard descriptions from the Reading Standards for Literacy in History/Social Studies are paraphrased and combined, using terminology that applies to reading a **California Connections** selection.

Writing

Many **California Connections** selections can be used as a model for future student writing tasks applying the Writing Literacy Standards by noting how the author structures the text, organizes the ideas, and provides well-chosen relevant and sufficient facts, extended definitions, concrete details, quotations, or other information and examples.

Using the *California Connections* Selection


The following pages note specific places where the **California Connections** selection provides examples for specific Writing Literacy Standards, using this selection as a writing model. They also provide suggestions for teaching students to analyze text structure using the Reading Literacy Standards. Teachers can incorporate more suggestions from the list above.

WHST.11–12.2a: Introduce a topic...

Suggestion: Have students notice how Imagery and use of second person is an effective attention grabber.

California Connections: A Postwar Boom in the Central Valley
Lesson 1 | page 1 of 4


A Postwar Boom in the Central Valley



Driving north on Interstate 5 from Los Angeles, you drop down from the Tehachapi Mountains into the Tulare Basin. Here, Earth has been carved into geometric patterns of straight lines and sharp angles. Wide, rectangular areas are filled with row after row of verdant crops that spring from the arid land as if by magic.

Dairy farms and feedlots spike the air with penetrating smells. The surrounding land is dotted with oil fields where derricks continuously move like giant, prehistoric creatures nodding their heads at Earth. Among the evidence of the agriculture and oil industries are a variety of strip malls and gas stations; parts of the once small towns that have now been turned into cities strung along the interstate.

Few people realize that this southern portion of the Great Central Valley was formerly an enormous wetland (pre-1900). Before water was sucked out of the Tulare Basin and used for agriculture, several large lakes covered this region. One of them, Tulare Lake, was the largest freshwater body west of the Mississippi. During flood years, it could span 486,400 acres and reach depths of 50 feet. Streams that



Poor air quality in the Central Valley

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WHST.11–12.2d: Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.

RH.11–12.10: ...read and comprehend history/social studies texts...independently and proficiently.

Suggestion: While reading the text, have students apply reading strategies to aid comprehension of the social studies content.


WHST.11–12.2d: Use precise language, domain-specific vocabulary...; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.

Example vocabulary includes: wetlands, oak woodlands, migration, black gold rush...

California Connections: A Postwar Boom in the Central Valley
Lesson 1 | page 2 of 4

flowed from the Sierra Nevada fed these lakes. Wetlands, oak woodlands, and vast grasslands surrounded them. This unique environmental region supported a wealth of wildlife, including herds of antelope and elk. Fish, otters, and waterfowl filled the lakes. Pelicans nested on an island in the middle of Tulare Lake, and the sky flickered with millions of birds that stopped here during their annual migration along the Pacific Flyway. Today, the sky is relatively devoid of birds. The great lakes are gone. In their place lies a stretch of terrain that hails as one of the driest in the state.

Resources and Growth
California Indians and European settlers knew of the resources of the basin and used them creatively. Intensive human use of the Tulare Basin began in the 1800s, when farmers began cultivating the rich valley soils in earnest. After World War II, this region became the agricultural center of North America, and sections of the region transformed from rural to urban almost overnight. Over a decade, New Deal projects and then the war effort caused unprecedented population growth in California. Urban areas like Los Angeles expanded, pushing farmland into the open space of the Central Valley. More people required more food resources. In order to increase the yield to feed the high demand, farmers applied chemicals developed during the war on their crops. These petroleum-based pesticides and fertilizers proved very effective, but the long-term cost of their application had yet to be revealed. By 1948, California was the largest agricultural state in the nation. The growth of agriculture, the aerospace industry, and population led to an increase in oil exploration in the state. California's Black-Gold Rush started in 1921, with the discovery of oil, just south of Los Angeles in Signal Hills. Demand for energy and petroleum-based products was so high that all the oil derricks in the basin could not pump enough oil to serve California's needs. During this time, California became one of the world's top oil exporters. One of the nation's largest oil reserves, the Kern River Oil Field, sat under the southern end of the Great Central Valley. The oil industry had tapped this reserve



Land damaged by excess irrigation

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RH.11–12.7: Integrate and evaluate multiple sources of information presented in diverse formats...(e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.

Suggestion: Discuss with students the reason this picture is identified as "land damaged..." Questions to pose include:

- Which features indicate this is damaged land?
- How does irrigation at this level alter the landscape?
- What may be done to reverse the damage?

RH.11–12.7: Integrate and evaluate...information presented in diverse formats...

Suggestion: Discuss with students the following questions and observations:

- Why was this photo chosen?
- How does it enhance the understanding of the message in the text?
- Analyze the other photos in the same way.

RH.11–12.4: Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of the text...

Example vocabulary includes: steam injection, agribusiness, petrochemicals...

California Connections: A Postwar Boom in the Central Valley
Lesson 1 | page 3 of 4

during World War II, but as the oil became harder to extract, the industry looked elsewhere. When the Korean War began in 1950, drilling in the Kern River Oil Fields resumed, and remains productive today.

In the 1950s and 60s, technology caused another boom for the oil and agriculture industries in the Great Central Valley. Steam injection techniques allowed for easier extraction of crude oil from under the ground while equipment and workers remained on the surface. The valley's rich topsoil

came under the control of a new form of agriculture known as agribusiness. Agribusiness is characterized by enormous fields of the same crop that are owned by corporations, irrigated by imported water, boosted by petrochemicals, and worked by a combination of oil-powered machinery and migrant labor. As agribusiness and the oil industries began to grow, towns in the Tulare Basin grew as well. The rate of habitat loss increased as more natural area gave way to new communities, highways, railways, and roads.

Feeling the Effects

But, it was not until the 1980s that state and federal agencies began to take note of the environmental changes taking place in the Central Valley. Toxic emissions from motor vehicles, industrial sources, and the agricultural industry filled the air, and an activity that people took for granted—breathing—became compromised. The Tulare Basin's air quality is affected by sources not only in the Basin but from outside areas as well. The Central Valley acts as an "air magnet," pulling in currents from the coastal and mountain areas across the state. Once in the valley, the mountains trap pollutants. From there they descend upon valley residents. Over the years since World War II, levels of carbon monoxide, ozone, and particulate matter in the air over the Tulare Basin have risen. In the 1980s, the air was recognized as a public health threat. The California Air Resources Board currently monitors sites throughout the Tulare Basin to assess air quality. They warn the public to limit outdoor activity when air pollution reaches dangerous levels. In recent years, stricter state regulations on emissions have improved air quality. Still, the air over the Tulare Basin and most of the San Joaquin



Large-scale tomato packing facility

4 CALIFORNIA EDUCATION AND THE ENVIRONMENT INITIATIVE | Unit 11.8.6 | Postwar Industries and the Emerging Environmental Movement | Student Edition

WHST.11–12.2: Write informative/explanatory texts, including the narration of historical events...

- a) ...organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.

Suggestion: Have students analyze how the writer organizes the ideas and information in this piece to explain complex concepts. Discuss how the author uses text structures and features to enhance reader comprehension.

RH.11–12.5: Analyze in detail how a [text] is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.

Suggestion: At the end of the unit, have students reread the selection and explain how the information from the maps, the diagrams in the visual aids, and the text from the reader work together to help readers understand the main ideas and details.

California Connections: A Postwar Boom in the Central Valley
Lesson 1 | page 4 of 4

Valley does not meet state or federal health standards for ozone or fine particulate matter. Because of this, the San Joaquin Air Pollution Control District regulates industries, such as agriculture and construction.

Another public health threat in the Tulare Basin, also recognized in the 1980s, is the degradation of groundwater and other fresh water sources. Industry runoff bearing pesticides and nitrates from fertilizers, as well as crude oil and other contaminants from the oil extraction process, entered the valley's water supplies over the postwar decades. Many of these chemicals are toxic to humans, as well as wildlife, and cause illness, birth defects, and cancer. In 1990, a Tulare County assessment showed that one-third of aquifers tested had high levels of nitrates, with 20% above maximum levels. Once contaminated, groundwater supplies are extremely difficult to decontaminate. Government agencies in the Great Central Valley monitor the byproducts of the agricultural and oil industries to prevent increased degradation.

Seeing the Connections

Over the past 20 years, urbanization has increased 31% in the Tulare Basin. Only 7% of the San Joaquin Valley remains undeveloped land—the



Oil pumps

lowest percentage of anywhere in California. This is the only land left to support all of the populations of the basin's native species, most of which are listed as threatened or endangered. The California Department of Fish and Game monitors populations of these animals and develops conservation plans for their habitats. State and county agencies are working with landowners and conservation groups to protect the few remaining natural areas in the Great Central Valley.

A look at the history of development in the Tulare Basin reminds us how interconnected human communities are with natural systems. An environment with clean air, clean water, and areas of preserved open space sustains natural systems, and the health and well-being of the people who live there. Our experience in the Great Central Valley has taught us an important lesson—if we take steps to protect the health of our natural regions, we take steps to secure our future.

RH.11–12.7: Integrate and evaluate multiple sources of information presented in diverse formats... (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.

Suggestion: Ask students how does this photo contributes to the impact of the message in the article.

WHST.11–12.2e: Provide a concluding statement or section that follows from and supports the information or explanation provided...

California Common Core State Standards Descriptions

Reading Standards for Literacy in History/Social Studies

- **RH.11–12.1:** Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
- **RH.11–12.2:** Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
- **RH.11–12.3:** Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.
- **RH.11–12.4:** Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).
- **RH.11–12.5:** Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.
- **RH.11–12.7:** Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.
- **RH.11–12.8:** Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other information.
- **RH.11–12.9:** Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.
- **RH.11–12.10:** By the end of grade 12, read and comprehend history/social studies texts in the grades 11–12 text complexity band independently and proficiently.

Speaking and Listening Standards

- **SL.11–12.1:** Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grades 11–12 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively.
 - a) Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
- **SL.11–12.2:** Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects

- **WHST.11–12.1:** Write arguments focused on *discipline-specific content*.
 - a) Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.
 - b) Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases.
 - c) Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
 - d) Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
 - e) Provide a concluding statement or section that follows from or supports the argument presented.

Common Core Reference Pages

- **WHST.11–12.2:** Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
 - a) Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
 - b) Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience’s knowledge of the topic.
 - c) Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
 - d) Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.
 - e) Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).
- **WHST.11–12.4:** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- **WHST.11–12.5:** Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
- **WHST.11–12.9:** Draw evidence from informational texts to support analysis, reflection, and research.
- **WHST.11–12.10:** Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.